Cancer Peril Found In Polluted City Air

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By ARTHUR McCLURE

The air that American city dwellers breathe teems with cancer-producing agents, a study by the U. S. Public Service shows.

But the results of the survey held reassurance for residents of the four communities in the N. Y. Metropolitan Area that served as guinea pigs in the tests.

These cities are Newark, Jersey City, Bayonne and Paterson, N. J. All are heavily industrialized, but they scored well below most of the other urban centers where the atmosphere was sampled.

What the researchers sought were chemicals that have produced cancer in animals in laboratory tests. Chief of these chemicals is 4-3 benzyprine, which the PHS said is produced by incomplete combustion and is found in auto exhausts and coal and oil smokes.

Here is the number of micrograms of benzyprine found in 1,000 cubic meters of air in the New Jersey cities:

Newark	4.5
Jersey City	6
Bayonne	5.5

HIGHER IN U. S. CAPITAL

Washington, D. C., which has about the same population as the four New Jersey communities and has no industry, measured 9.3 micrograms.

At the other end of the scale were Altoona, Pa., with 61 and Richmond, Va., with 45.

Fog-ridden London scored a high of 147. More surprisingly, Milan, Italy, registered 231.

Dr. Eugene Sawicki, of the Robert A. Taft Sanitary Engineering Center at Cincinnati directed the survey.

He said polluted air is a greater source of benzpyrene than cigarets, which also produce the chemical.

He said a non-smoker living in a large U. S. city is exposed to more of the chemical than a person living in the country who smokes a pack a day.

N. Y. NOT IN SURVEY

Dr. Sawicki also declared the difference in the amount of cancer-producing chemicals in the air of cities and non-urban areas corresponds to the pattern of lung cancer mortality rates. He said these tables show a much higher lung cancer death rate in cities.

New York City was not included in the nationwide sampling of air, nor was any other community in the state. There is no explanation of why New York State was excluded.

But it was considered significant that the survey included New Jersey communities which New York officials have said contribute to air pollution here because of prevailing westerly winds.

Lung Cancer Is Tied to Air Pollution

NEWS
Washington, D.C.
May 26, 1960

Science has strengthened its case against air pollution in the investigation of causes of lung cancer.

The findings of Dr. William C. Hueper of the National Cancer Institute in Cincinnati thus minimized the effect of cigaret smoking in linking air pollution to cancer in his research which co-ordinated statistical, chemical and laboratory data.

Dr Hueper cited Birmingham, Ala., as a prime example of the dangers of contaminated atmosphere. It has a lung-cancer rate three times as high as the national average. He pointed out this is in direct proportion to the amount of benzpyrene in the air. Recently the Public Health Service reported benzpyrene was in all air samples taken from over 100 cities.

The evidence points to the fact that Birmingham is in a situation similar to numerous industrial cities in Britain that also burn large quantities of coal and have a similar ratio of benzpyrene and cases of lung cancer.

Dr. Hueper reported in his study that all areas have an "atmospheric carcinogenic spectrum" which is affected by the towns industrial activity and the weather. The type of fuel burned in the town was listed as an important factor.

Unlike the coal burning cities of Britain, U. S. towns have factors affecting air pollution, and it is difficult to find a common denominator in analyzing the problem.

He urged industry to cooperate in launching studies of the cancer problem among workers and methods of combating air pollution.

POST & TIMES STAR
Cincinnati, Ohio
May 9, 1960

Smoking Pack a Day in Suburbs Believed Safer Than Big-City Life

A big-city non-smoker inhales more of an airborne chemical suspected as a cause of lung cancer than a pack-a-day suburban smoker, a Cincinnati scientist says.

The chemical or gas is benzpyrene and the scientist is Dr. Eugene Sawicki. Dr. Sawicki and other scientists at the Robert A. Taft Sanitary Engineering Center recently completed an 18-month preliminary study of the benzpyrene content of the air in 103 cities and 28 rural areas.

Benzpyrene is believed to come from the incomplete burning of fuels, waste materials and other combustible substances. It also is associated with tarry substances.

A PACK-A-DAY smoker inhales approximately 60 micrograms of benzpyrene a year, Dr. Sawicki said. The average non-smoker in Cincinnati would inhale about the same amount, he said.

An average non-smoker would be a person who works in a city and lives in a suburb. A person who lives and works in the downtown area would inhale more, Dr. Sawicki said.

Others who live near certain types of industrial plants or work at some jobs also would inhale much more of the chemical.

As an example, Dr. Sawicki said a man who works with tar would be exposed to concentrations 100 times greater than the average person.

MORE BENZPYRENE is found in the atmosphere in winter than in summer, probably because of large amounts of fuels burned for heating. Concentrations also are heavier in the East and Midwest than in the West.

The number of micrograms of benzpyrene recorded in a year at some sampling sites include:

Missouri State Forest, .1; Helena, Mont., .8; San Francisco, 14; Los Angeles, 20; New Orleans, 26; Atlanta, 44; Cincinnati, 79; Detroit, 110; Nashville, 120; Birmingham, 150; County Hall, London, England, 320.

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Source: https://www.industrydocuments.ucsf.edu/docs/mrbm0000